

IN THE SPECIFICATION

Please replace the paragraph beginning on page 3, line 12 as follows:

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In addition to the need for uniform thickness of thin single layer or multilayer films, there is also a need for thin single layer and multilayer films of graded thickness. One prior approach to obtaining graded thickness involves computer-controlled movement of shutters. See M.P. Bruijn, et al., Automatic electron-beam deposition of multilayer soft x-ray coatings with laterally graded d-spacing, Optical Engineering, August 1986, Vol. 25, No. 8. In this approach, two shutters are moved in mutually perpendicular directions in front of a substrate over an area 10cm x 10cm, with each shutter having a linear motion, such that movement of the two perpendicular slits result in a square aperture through which flux from a source is directed onto the substrate. A recently successfully demonstrated technique which greatly improves uniformity for magnetron sputter deposition systems is described and claimed in copending U.S. ~~Application Serial No. 09/454,673~~ Patent No. 6,524,449, filed December 3, 1999, issued February 25, 2003, entitled "Method and System For Producing Sputtered Thin Films With Sub-Angstrom Thickness Uniformity or Custom Thickness Gradients," assigned to the same assignee, and is directed to systems in which the substrate is translated across stationary sources. That technique involves measuring the non-uniform flux distribution from the sputter sources-- the flux distribution is then used as input data to a computer model that relates a given velocity profile of the substrate platter to the resulting thickness

distribution of the deposited films. With a set of these relationships calculated in advance, the user can select a substrate platter velocity profile recipe to obtain the desired film thickness distribution. The method of the above-referenced application has been successfully used to improve thin film uniformity to 0.1% over 6-inch substrates and on curved optics (a 5X factor of improvement).

Furthermore, that method allows one to develop the process more rapidly than the purely empirical approach, with about half the number of process development runs (iterations). This is especially valuable when coating sets of optics--the many different sizes, shapes, and prescriptions require development of a customized process for every different optic.

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Curve